Code Units based Framework for domain- independent Visual Design and Development

Abstract

This framework provides for the creation, (re)use, and management of Domain specific Code Units as basic building block for Domain neutral Visual Programming environments. Code Units are Application Programming Interfaces (API). Users create and maintain Code Units definitions (including implementations, visual representations and/or standard Model representations for Model based development) for specific programming Domain and they or others can then use or extend the created Code Units both through the code and/or the provided visual programming on the said Domain. The semantics of "instrumented", thus fully integrate-able to Visual environment Code Units applied to different programming Domains provide support for very rich, location transparent (i.e. – both local and remote "discovered" Code Units are supported), easy to implement and minimal "usage" footprint Visual Design and Development, two-way code generation, and generated program execution, representations of Code Units in-

stances as Visual Entities and Models, Model Transformations and Model Analyses.